

## VivaFix™ Cell Viability Assays

Bio-Rad's VivaFix Cell Viability Assays provide a sensitive measurement for determining the viability of mammalian cells for flow cytometry and cell imaging studies. These amine-binding dyes can be used with unfixed or fixed samples to easily exclude dead cells and calculate live:dead ratios.

- Distinct discrimination between dead and live cell populations
- Compatible with fresh cell, cell fixation, and intracellular protocols
- 8 different excitation/emission wavelength combinations from ultraviolet to far red

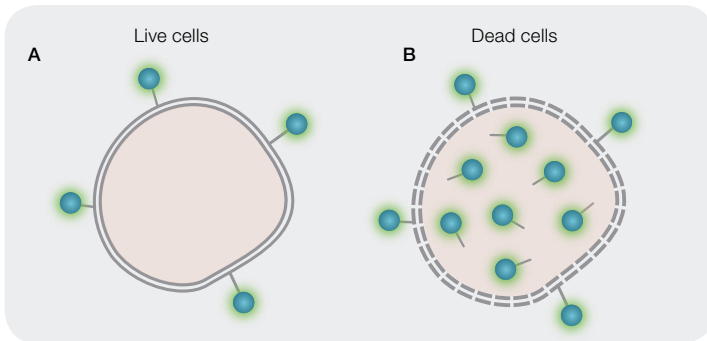
Visit [bio-rad.com/web/VivaFix](http://bio-rad.com/web/VivaFix) for more information.



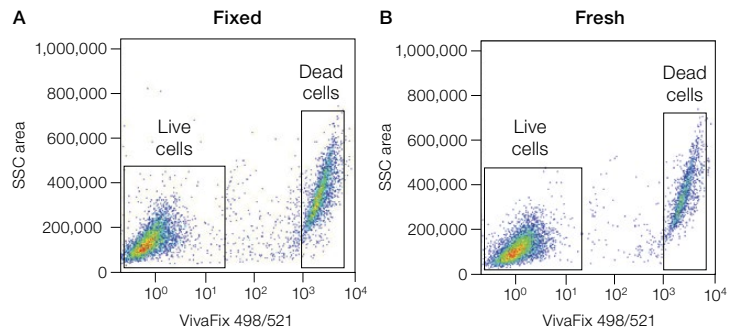
## Accurately Determine the Viability of Your Cells

Using proprietary amine reactive dyes, VivaFix Cell Viability Assays can easily distinguish between live and dead cells, providing at least a 100-fold difference in fluorescence intensity between the two populations. The brightness of VivaFix Dyes is preserved upon treatment with fixative agents and can be used with biohazardous samples to track cell viability after fixation.

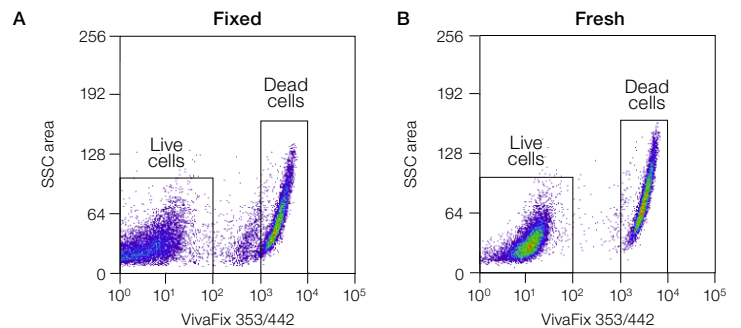
Available VivaFix Assays include ultraviolet to far red excitation and multiple emission spectra. Choose among eight different combinations to select the most appropriate excitation/emission wavelength for your experiments.



**VivaFix Cell Viability Assay chemistry.** **A**, VivaFix Dyes bind to the cell surface primary amines of viable cells; **B**, in dead cells, where the plasma membrane is compromised, VivaFix Dyes are able to permeate the cell and also react with intracellular primary amines. As a result, a greater number of fluorophores is associated with dead cells.



**Cell viability using VivaFix and the S3e™ Cell Sorter.** Jurkat cells were stained with the VivaFix 498/521 Dye, fixed with 3.7% formaldehyde (**A**) or not fixed (**B**), and analyzed with the S3e Cell Sorter. SSC, side scatter.



### Assessment of cell viability using VivaFix and the ZE5™ Cell Analyzer.

Jurkat cells were heat shocked at 65°C for 5 min, then washed and suspended at  $2 \times 10^6$  cells/ml in phosphate buffered saline. Cells were incubated with VivaFix 353/442 at 37°C for 30 min in the dark. **A**, half of the cells fixed in 1% paraformaldehyde; **B**, half of the cells not fixed. Identical gates for all samples were used during analysis on the ZE5 Cell Analyzer. SSC, side scatter.

## Ordering Information

Catalog Number	Description	Maximum Excitation, nm	Maximum Emission, nm	Optimal Excitation Laser, nm	S3e Cell Sorter	ZE5 Cell Analyzer	ZOE™ Fluorescent Cell Imager
1351111	VivaFix 353/442	353	442	355		•	•
1351112	VivaFix 410/450	410	450	405	•	•	
1351113	VivaFix 408/512	408	512	405	•	•	
1351114	VivaFix 398/550	398	550	405	•	•	
1351115	VivaFix 498/521	498	521	488	•	•	•
1351116	VivaFix 547/573	547	573	561	•	•	•
1351117	VivaFix 583/603	583	603	561	•	•	•
1351118	VivaFix 649/660	649	660	640	•	•	

Each VivaFix Assay includes 4 x 50 test vials and 250 µl of dimethyl sulfoxide.



**Bio-Rad  
Laboratories, Inc.**

Life Science  
Group

**Web site** bio-rad.com **USA** 1 800 424 6723 **Australia** 61 2 9914 2800 **Austria** 43 01 877 89019 **Belgium** 32 03 710 53 00 **Brazil** 55 11 3065 7550  
**Canada** 1 905 364 3435 **China** 86 21 6169 8500 **Czech Republic** 36 01 459 6192 **Denmark** 45 04 452 10 00 **Finland** 35 08 980 422 00 **France** 33 01 479 593 00  
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**Japan** 81 3 6361 7000 **Korea** 82 2 3473 4460 **Mexico** 52 555 488 7670 **The Netherlands** 31 0 318 540 666 **New Zealand** 64 9 415 2280 **Norway** 47 0 233 841 30  
**Poland** 36 01 459 6191 **Portugal** 351 21 4727717 **Russia** 7 495 721 14 04 **Singapore** 65 6415 3188 **South Africa** 36 01 459 6193 **Spain** 34 091 49 06 580  
**Sweden** 46 08 555 127 00 **Switzerland** 41 0617 17 9555 **Taiwan** 886 2 2578 7189 **Thailand** 66 2 651 8311 **United Arab Emirates** 971 4 8187300  
**United Kingdom** 44 01923 47 1301

